

BACE2 Antibody

BACE2 (CT): Beta-site APP cleaving enzyme 2, Asp1, DRAP

CATALOG NO.: 2249

BACKGROUND:

Accumulation of the amyloid- β ($A\beta$) plaque in the cerebral cortex is a critical event in the pathogenesis of Alzheimer's disease. $A\beta$ peptide is generated by proteolytic cleavage of the β -amyloid protein precursor (APP) at β - and γ -sites by proteases. The long-sought β -secretase was recently identified by several groups independently and designated beta-site APP cleaving enzyme (BACE) and aspartyl protease 2 (Asp2) (1-4). BACE/Asp2 is a novel transmembrane aspartic protease and co-localizes with APP. A BACE homolog was recently cloned and designated BACE2, Asp1, DRAP (for Down region aspartic protease), and memapsin 1 (4-9). BACE2 also cleaves APP at β -site and at a different site within $A\beta$ (8). BACE2 locates on chromosome 21q22.3, the so-called 'Down critical region', suggesting that BACE2 and $A\beta$ may also contribute to the pathogenesis of Down syndrome (6,7)

SOURCE:

Rabbit polyclonal BACE2 antibody was raised against a peptide corresponding to amino acids near the carboxy terminus of human BACE2 (4).

APPLICATION:

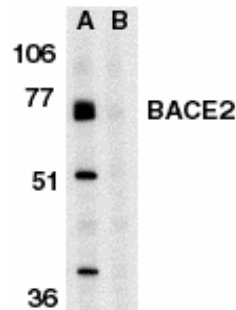
BACE2 antibody can be used for detection of BACE2 by Western blot at 0.5 to 1 $\mu\text{g/ml}$. (Optimal dilution should be determined by user.) Human heart tissue lysate can be used as positive control. **For research use only.**

STORAGE:

BACE2 antibody is supplied as immunoaffinity chromatography purified IgG, in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year. Azide free antibody is available.

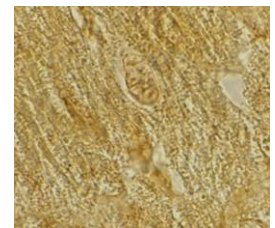
RELATED PRODUCTS:

Blocking peptide, Catalog No. **2249P**.
Human Heart tissue Lysate, Catalog No. **1301**.
BACE Antibody (NT), Catalog No. **2247**.



Western blot analysis of BACE2 in human heart tissue lysate in the absence (A) or presence (B) of blocking peptide with BACE2 antibody at 1 $\mu\text{g/ml}$.

Immunohistochemistry of BACE2 in rat heart tissue with BACE2 antibody at 2 $\mu\text{g/ml}$.



REFERENCES:

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4. Yan R, et al. Membrane-anchored aspartyl protease with Alzheimer's disease beta-secretase activity. *Nature* 1999; 402:533-7
5. Lin X, et al. Human aspartic protease memapsin 2 cleaves the beta-secretase site of beta-amyloid precursor protein. *Proc Natl Acad Sci USA* 2000 15; 97:1456-60
6. Acquati F, et al. The gene encoding DRAP (BACE2), a glycosylated transmembrane protein of the aspartic protease family, maps to the down critical region. *FEBS Lett* 2000; 468:59-64
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(RD1005)